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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,712

08/17/2005

Kuniko Kimura

12480-000108/US

9156

30593

7590

11/19/2008

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EXAMINER

ULLAH, ELIAS

ART UNIT

PAPER NUMBER

2892

MAIL DATE

DELIVERY MODE

11/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,712	KIMURA ET AL.	
	Examiner	Art Unit	
	ELIAS ULLAH	2892	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7-12 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) 22-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7-12 and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/29/2008</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to an amendment filed on 10/29/2008.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/29/2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-4, 7-12 and 17-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In base claims 1 and 2, applicant claimed "a mechanical force is applied", however applicant fails to disclose such claimed subject matter in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 7-8, 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Foster et al. (Foster, US 4,916,688).

With regard to claims 1-2, 19-20, Foster shows method for manufacturing a thin film 12 (Fig. 1), comprising the step of applying a force (Fig. 1), with a part having a sharp tip 11, onto an entire area or arbitrary region of a film 12b during or after formation of the film 12, so as to control a structure of the film, wherein the structure of the film is controlled by controlling (i) a crystalline structure of crystals constituting the film, (ii) an orientation direction of crystals constituting the film, (iii) an orientation direction of molecules in the crystals, or (iv) any combination of (i) through (iii) (col. 3, lines 15-30), and a surface of the film 12 is scanned by using the part having a sharp tip 11 and a mechanical force is applied (see Fig. 1, wherein probe 10 is disposed on film 12, also the tip is being moved by a mechanical force see col. 3, lines 10-12) in a scanning direction so that the crystals and/or molecules are oriented in the scanning direction (col. 3, lines 10-15).

With regard to claims 3-4, Foster shows the force applied (see Fig. 1, wherein probe 10 is disposed on film 12) on the film 12 derives from only the part having a sharp tip 11.

With regard to claims 7 and 8, Foster shows the thin 12 film is formed on a substrate 13.

With regard to claim 21, Foster shows a multi layered film 12 12b is carried out on all of or some of the layers of the multi layered film 12, 12b.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster et al. (Foster, US 4,916,688) in view of Dietzel et al. (Dietzel, US 6,665,258).

With regard to claims 9-10, Foster the part having a sharp tip 11 is a scanning tunneling microscopy (STM, Abstract) but fails to teach sharp tip is an atomic force microscope (AFM).

Dietzel teaches the part having a sharp tip is an atomic force microscope (col. 1, lines 25-30). At the time the invention was made; it would have been obvious to a person having ordinary skill in the art to use "a sharp tip is an atomic force microscope" teaching of Dietzel in the method for manufacturing a thin film of Foster, because AFM is easily substitute Foster's STM for measuring the force between a probe tip and medium as taught by Dietzel in (col. 1, lines 26-30).

With regard to claims 11-12, Foster teaches plural areas 12b, but fails to teach plural areas of the film are simultaneously processed with plural parts having sharp tips.

Dietzel teaches plural areas of the film are simultaneously processed with plural parts having sharp tips (col. 5, lines 46-60). At the time the invention was made; it would have been obvious to a person having ordinary skill in the art to use " plural areas of the film are simultaneously processed with plural parts having sharp tips" teaching of Dietzel in the method for manufacturing a thin film of Foster, because plural parts

having sharp tips are able to measure multiple area of a storage medium as taught by Dietzel in (col. 5, lines 46-50).

7. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster et al. (Foster, US 4,916,688) in view of Marks et al. (Marks, US 2005/0147846).

With regard to claims 17-18, Foster shows the thin film 12 is made of storage material, but fails to teach the thin film made of an organic polymer.

However, Marks teaches the thin film made of an organic polymer [0047]. At the time the invention was made; it would have been obvious to a person having ordinary skill in the art to use "the thin film made of organic polymer" teaching of Marks in the method for manufacturing a thin film of Foster, because the thin film made of organic polymer can be substitute for Foster's thin film for evaluating the thin film by an atomic force microscope as taught by Marks in [0047].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIAS ULLAH whose telephone number is (571)272-1415. The examiner can normally be reached on weekdays, between 8AM-5PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thao Le can be reached on (571) 272-1708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elias Ullah/
Examiner, Art Unit 2892

/Thao X Le/
Supervisory Patent
Examiner, Art Unit 2892